



Lower Lobe Pneumonia Presenting with a Picture of Acute Abdomen: Case Report

Akut Batın Tablosu ile Gelen Alt Lob Pnömonisi: Olgu Sunumu

Lower Lobe Pneumonia

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Özet

Alt lob pnömonisinin akut batın tablosuna neden olabileceği bilinmekle beraber, solunum sistemine ait yakınma ya da bulgu olmadığı zaman kolayca göz ardı edilebilmektedir. Bu olgu, akut batın tablosu ile başvuran hastalarda alt lob pnömonisini hatırlatmak amacıyla sunuldu. On yaşında erkek hasta 2 gün önce başlayan şiddetli karın ağrısı yakınması ile hastanemiz acil polikliniğimize başvurdu. Yapılan batın muayenesinde hassasiyet, rebound ve defans mevcuttu. Solunum sistem muayenesi ve diğer sistem muayeneleri normaldi. Ön-arka akciğer grafisi, ayakta direkt batın grafisi normaldi. Batın ultrasonografisinde akut batın lehine bulgu saptanmadı. Çekilen batın tomografisinde sağ alt lob pnömonisi tesbit edildi. Akut batın tablosuyla başvuran pnömoni hastalarında solunum sistemine ait yakınma ve direkt grafide bulgu olmadığında tanıda zorluklar yaşanmaktadır. Bu hastalarda doğru tanıya gitmenin anahtarı anamnez ve fizik muayene olsa da tanının netleşmediği durumlarda BT gibi ileri tetkikler istenerek tanıdaki gecikmeler önlenmiş olacaktır.

Anahtar Kelimeler

Akut Batın; Çocuk; Alt Lob Pnömonisi

Abstract

It is known that lower lobe pneumonia may result in a picture of acute abdomen; however, it can be easily overlooked when there are no signs or symptoms of the respiratory system. This case has been reported to remind the reader of the possibility of lower lobe pneumonia in patients presenting with a picture of acute abdomen. A ten-year-old male patient presented to our emergency outpatient clinic with the symptom of severe stomach ache that had started 2 days previously. The abdominal examination showed sensitivity, rebound, and defense. The examination results for his respiratory system and other systems were normal. The anterior-posterior pulmonary x-ray and direct abdominal x-ray in standing position were normal. No signs of acute abdomen could be seen in his abdominal ultrasonography. Lower lobe pneumonia was identified in his abdominal CT. It is difficult to diagnose pneumonia in patients who present with a picture of acute abdomen if there are no symptoms and x-ray signs related to the respiratory system. Anamnesis and physical examination are key to reaching an accurate diagnosis in such patients; however, any delay in diagnosis can be prevented by requesting further studies such as CT if the diagnosis cannot be ascertained by physical examination.

Keywords

Acute Abdomen; Child; Lower Lobe Pneumonia

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Introduction

Abdominal pain is a frequent symptom during the progress of various diseases that involve the intra-abdominal area or other systems. It is one of the most frequent reasons why children present to emergency services [1]. Traumatic pathologies that suddenly emerge in one of the intra-abdominal organs or lead to serious consequences requiring surgical intervention are collectively named “acute abdomen.” However, since certain diseases cause abdominal pain but do not require surgical treatment, it should be quickly and systematically determined whether a patient with acute abdominal pain requires surgical treatment. A problem requiring surgery is seldom encountered in children presenting to the emergency service with the picture of acute abdomen. Intra-abdominal pathologies such as acute gastroenteritis, mesenteric lymphadenitis, and urinary tract infection as well as several diseases such as diabetic ketoacidosis and acute tonsillitis may result in a picture of acute abdomen [2].

Although it is known that lower lobe pneumonia cases may result in a picture of acute abdomen, it can easily be overlooked when there are no symptoms or signs related to the respiratory system. This paper emphasizes the need to consider extra-abdominal pathologies such as lower lobe pneumonia in patients presenting with a picture of acute abdomen.

Case Report

A ten-year-old male patient presented to our emergency outpatient clinic with the symptoms of severe abdominal pain and mild fever. The patient’s abdominal examination revealed defense and rebound. Therefore, consultation was requested from the pediatric outpatient clinic. The physical examination showed that the patient’s overall condition was moderate; he was conscious, cooperative, and restless. The patient had body temperature of 37.8 °C, heart rate 120/min, respiratory count 24/min, and blood pressure 100/80mmHg. The patient’s personal and family histories did not reveal any particular considerations. Sensitivity, rebound, and defense were present during abdominal examination. The examination results for his respiratory system and other systems were normal. The patient’s laboratory results were as follows: WBC:17330/mm³, Hgb: 13.5 g/dL, Htc:40.7, Plt: 402, and C-reactive protein: 34.2 mg/dL. The biochemical studies and urinary analysis results were normal. The patient’s anterior-posterior pulmonary x-ray and direct abdominal x-ray in standing position were assessed as normal (Pictures 1,2). Acute abdomen was considered and abdominal ultrasonography was performed. No signs indicating acute appendicitis or acute abdomen were identified. Follow-up with ultrasonography was recommended. Consultation was requested from the department of pediatrics to assess the patient further with respect to acute abdomen. The department of pediatrics requested an abdominal tomography. A lower right lobe pneumonia was identified in the patient’s abdominal tomography (Pictures 3,4). The patient was diagnosed with lobar pneumonia and hospitalized in the pediatric service to start intravenous fluid treatment and ampicillin-sulbactam therapy. The patient was treated for seven days and discharged as cured.

Discussion

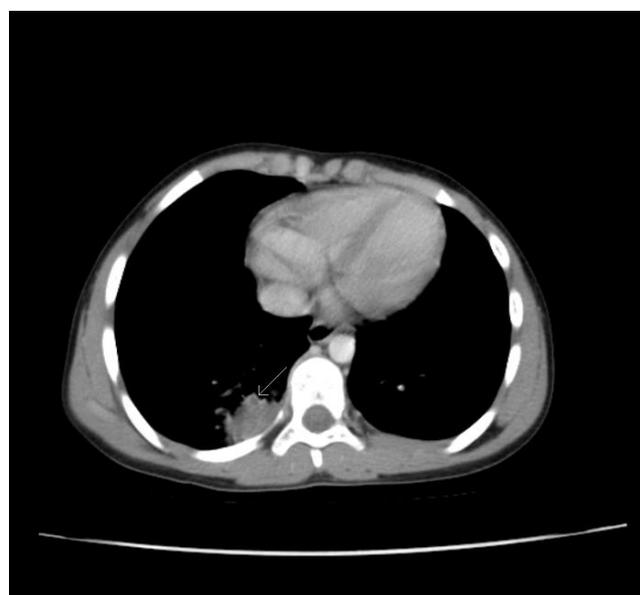
The majority of presentations to emergency services in Tur-



Picture 1. Posterior-anterior pulmonary X-Ray



Picture 2. Direct abdominal x-ray in standing position



Picture 3. The patient’s abdominal Computerized tomography (mediastinal window)

key are for problems that are not medically urgent and can be solved at outpatient clinics. The most frequent symptom in half of the school-age children brought to the emergency service is abdominal pain [3]. This symptom is frequently encountered



Picture 4. The patient's abdominal Computerized tomography (parenchymal window)

during the progress of various diseases that are associated with the intra-abdominal area or other systems. There are various reasons for abdominal pain. A disease that requires surgery is found in only 5% of patients who present to the emergency service with abdominal pain.

Acute abdomen is a broad clinical designation that can range from an unimportant condition to life-threatening medical or surgical conditions that require hospitalization [4]. Acute abdomen has a high rate of incidence among children; however, it is mostly a self-limiting condition and hospitalization is rarely required. There may sometimes be problems in diagnosing children who present to the emergency services with the picture of acute abdomen. Abdominal pain may sometimes be the only sign of pneumonia. Our case also had the sole symptom of abdominal pain.

Reflective pain has the same characteristics as parietal pain and these types of pain are well-localized; however, the pain is experienced far from the involved organ. The pain is felt outside the related organ since structures from the same embryological origin have a shared central nervous pathway. For example, the T9 dermatome is shared by the lungs and abdomen; therefore, a case of lower right lobe pneumonia may lead to a symptom of abdominal pain [5].

Lower lobe pneumonia cases account for 2-5% of the patients who present to emergency services with a picture of acute abdomen [6]. In cases where abdominal pain is accompanied by signs such as fever and cough, pulmonary pathologies are strongly considered. However, there may be confusions in diagnoses of patients who present with the sole symptom of severe abdominal pain. The fact that our patient did not have any symptoms of coughing led to a delay in diagnosis.

It has been reported that correct diagnosis can be made in 90% of cases presenting with abdominal pain following detailed physical examination [7]. For that reason, all children presenting with acute abdominal pain should definitely undergo chest examination. Pulmonary x-ray in patients presenting with the picture of acute abdomen is not requested from every patient as part of routine practice. Pulmonary x-rays taken in standing position that also include the lower parts of the lungs can be

helpful in diagnosis. On the other hand, it should be remembered that significant infiltration may not be observed in the early period of pneumonia. In our case, a direct abdominal x-ray in standing position and a pulmonary x-ray to include the lower parts of lungs were taken; however, the diagnosis could not be made since there was no significant infiltration in the early period (Pictures 1,2). Our patient was diagnosed on the basis of abdominal CT. Computerized tomography (CT) is a technique that better demonstrates the details of pulmonary morphology as compared to direct x-rays. It has been commonly used in adults for the past ten years in imaging parenchymal lung diseases, with chronic diffuse infiltrative lung diseases ranking first [8]. Today, it is commonly used in diagnosis and follow-up of pediatric pulmonary diseases, as well.

In conclusion, it can be difficult to diagnose pneumonia in patients presenting with the picture of acute abdomen especially if there are no respiratory symptoms and signs from direct x-ray. Detailed anamnesis and careful physical examination are key to reaching an accurate diagnosis in patients presenting with abdominal pain. Where diagnosis is not clear, requesting further studies such as CT may prevent delays in diagnosis and unnecessary surgical interventions.

Competing interests

The authors declare that they have no competing interests.

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